

forward groove wall" in these claims. To overcome this rejection, appropriate amendments have been made to claims 7 and 10. Specifically, the end of claim 7 has been amended so as to provide the proper antecedent basis for what is called for at claim 9. Similarly, an amendment has been made at line 4 of claim 10 to call for a forward side wall and a rearward side wall, as applied to each of the grooves.

Turning now to the art rejections, claims 1 - 4 and 6 were rejected under 35 U.S.C. 102(b) on the basis of Simms. Claim 5 was also rejected on the basis of Simms, this rejection being on 35 U.S.C. 103.

Reconsideration of these rejections is requested for the following reasons.

The Simms machine includes a cylindrical cutter wheel 18 which is provided with a plurality of circumferentially running grooves 28, clearly seen at Figure 7 of the drawings. The Simms machine operates in either of two modes. In one mode, anti-skid grooves are formed, without leveling the pavement, by setting the wheels 34 in one position. This is described at Lines 60 - 65 of Column 6. In the other mode, the pavement is to be leveled and wheels 34 are placed in an elevated position and the cutter cylinder 18 is operated to level the pavement. This is described at Lines 10 - 30 of Column 7. In neither mode of operation is the cutting cylinder 18 of Simms moved alternately up and down as it rotates about its longitudinal axis. Still further, each of the grooves, which are formed in the first mode of operation, is clearly of a shape complementary to that of the grooves 28 in the periphery of cutting cylinder 18.

Claim 1 has been amended to call for the cutting cylinder as moving alternately up and down as it rotates about its longitudinal axis. The claim has further been

intended to call for such groove being of a shape complementary to the surface of the cutting cylinder. Thus, if the cutting cylinder has a radius of, for example, six inches, then the grooves cut by it in the road will have that radius. This is not shown or suggested in Simms. With respect to the amendment in Claim 1 calling for the cutting cylinder to move alternately up and down as it rotates, it would appear theoretically possible for Simms to also do this. However, if anyone did move the cylinder 18 of Simms up and down, as the machine moved along the road, for the purpose of forming grooves such as shown in the present disclosure of this application, and not in view of any suggestion by Simms or anyone else in this art. It is accordingly urged that the Examiner would be completely justified in reconsidering the initial rejection, on the basis of Claim 1 as amended.

The forward side wall portion called for at Claim 9 now appears in Claim 7, and it is accordingly believed that the Examiner's objection to Claim 9 would be withdrawn.

Turning now to the rejection of Claim 5 on the basis of Simms under 35 U.S.C. 103, the same arguments for patentability are repeated; namely, Claim 1 as now amended calls for an apparatus not reasonably derived from Simms, and accordingly, the Examiner, it is urged, would be justified in withdrawing the rejection of Claim 5.

Claims 10 and 11 were rejected under 35 U.S.C. 103 on the basis of Dofsen, in view of Liddle. Reconsideration of this rejection is requested for the following reasons.

Claim 10 has been amended to call for, among other things, the shape of the grooves to be complementary to a portion of the curved surface of a cylinder.

Claim 11 has also been amended so as to contain language relating to the different steepness of the forward and rearward sides of the grooves, which language is more in conformity with previously employed terminology.

Regarding Claims 10 and 11, the attention of the Examiner is invited to the accompanying Prior Art Statement, which lists three patents. These patents were identified by the Applicant in a search made subsequent to the filing of this application, no prior search having been made. The search was made for the purpose of preparing a Petition to Make Special, such preparation now being moot by the Examiner having already acted on the application. The search was conducted in Class 404, Subclasses 9, 12, 14, 16, 71, 72, 89, 93, 94, 112 and 122. Two of the three patents, those to Summers and Zipelius, appear to show edge groove rain drainage/markings structures for a roadway.

The third patent, that to Perkins, appears to be similar to Simms, cited by the Examiner, but not as pertinent, because the Perkins cylinder operates on freshly-laid concrete which is still in a plastic condition, instead of on hardened pavement.

Claim 10 calls for the grooves to be complementary to a portion of the curved surface of a cylinder. Neither Summers nor Zipelius shows such a groove configuration. In Summers, the road edge water drainage/reflecting elements are either precast and then conveyed to the site, or alternatively, are cast in situ, see Lines 25-35 of Column 5 of Summers. In Zipelius, the edge strips are either prefabricated, or alternatively, are cast in situ, see the bottom of Column 1 and Lines 1-15 of Column 2 of Zipelius.

Thus, while each of Summers, Zipelius and the Applicant shows a road edge construction which drains water and reflects light, only the particular construction of the

applicant permits the formation of such a road edge system on existing roads without cutting preferred strips or casting them in situ. It is the use of Applicant's rotating cutter cylinder, necessarily yielding the claimed groove shape, which makes possible the rapid and inexpensive conversion of existing roads (as well as new roads of course) to those having the safety advantage of road edge delineation in darkness hours during rain without the need of auxiliary lighting, such as from lamps mounted on poles along a roadway.

Claim 11 further calls for the different slope of the forward and rear groove portions to be different, a feature not shown in the art of record.

Claims 12 and 13 are directed to a road rumble strip system. This function of the invention is discussed at the last portion of the first paragraph of page 7 and in the middle of the full paragraph of page 8.

By the above, the applicant has made a genuine attempt to fully respond to the formal rejections and to the art rejections, has amended the claims, and has attempted to point out why the Examiner would be justified in favorably reconsidering the claims. Reconsideration is accordingly requested.

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